

Serial No. 09/639,678

- 2 -

Art Unit: 2815

active layer 10 and hence move the emission wavelength into and out of resonance with the optical cavity formed between the top and bottom mirrors. The optical output is therefore modulated by the electrical field and not as by injected carriers..."(Col. 2, lines 45-49).

Kullander further states, at col. 2 lines 62-64 "... The electrical field is supplied by contacts 12 on top surface and a contact 13 to the 1300 nm VCSEL bottom mirror, which may serve as ground..."

In contrast, claim 1 recites "...optically pumping the VCSEL *by directing an output from a pump laser onto the bottom face of the VCSEL* so as to cause the VCSEL to generate a first output having an output power greater than zero..." Thus, the structure of the claimed invention is fundamentally different from that of Kullander-Sjoberg et al., and the rejection should be removed.

Claim 2 recites "...A method for modulating the output of an optically pumped, tunable VCSEL having a top face in communication with an active region of the VCSEL and a bottom face, wherein said method comprises the steps of (1) *optically pumping the VCSEL by directing an output from a pump laser at the bottom face of the VCSEL so as to cause the VCSEL to generate an output*; and (2) applying a voltage across the VCSEL's active region so as to alter the optical power circulating in the VCSEL's cavity, to control the output power of the VCSEL..." In order to support a rejection under 35 U.S.C. §102, every limitation in the claims should be shown or suggested in the references. The Kullander-Sjoberg case does not satisfy this criteria, and therefore the rejection should be withdrawn.

Newly added claim 3 includes limitations similar to those of Claims 1 and 2 and is allowable for at least the reasons put forth with regard to claim 2.

Serial No. 09/639,678

- 3 -

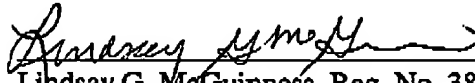
Art Unit: 2815

Applicants have made a diligent effort to place the claims in condition for allowance. However, should there remain unresolved issues that require adverse action, it is respectfully requested that the Examiner telephone Lindsay G. McGuinness, Applicants' Attorney at 978-264-6664 so that such issues may be resolved as expeditiously as possible.

For these reasons, and in view of the above amendments, this application is now considered to be in condition for allowance and such action is earnestly solicited.

Respectfully Submitted,

11/3/2003
Date


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